



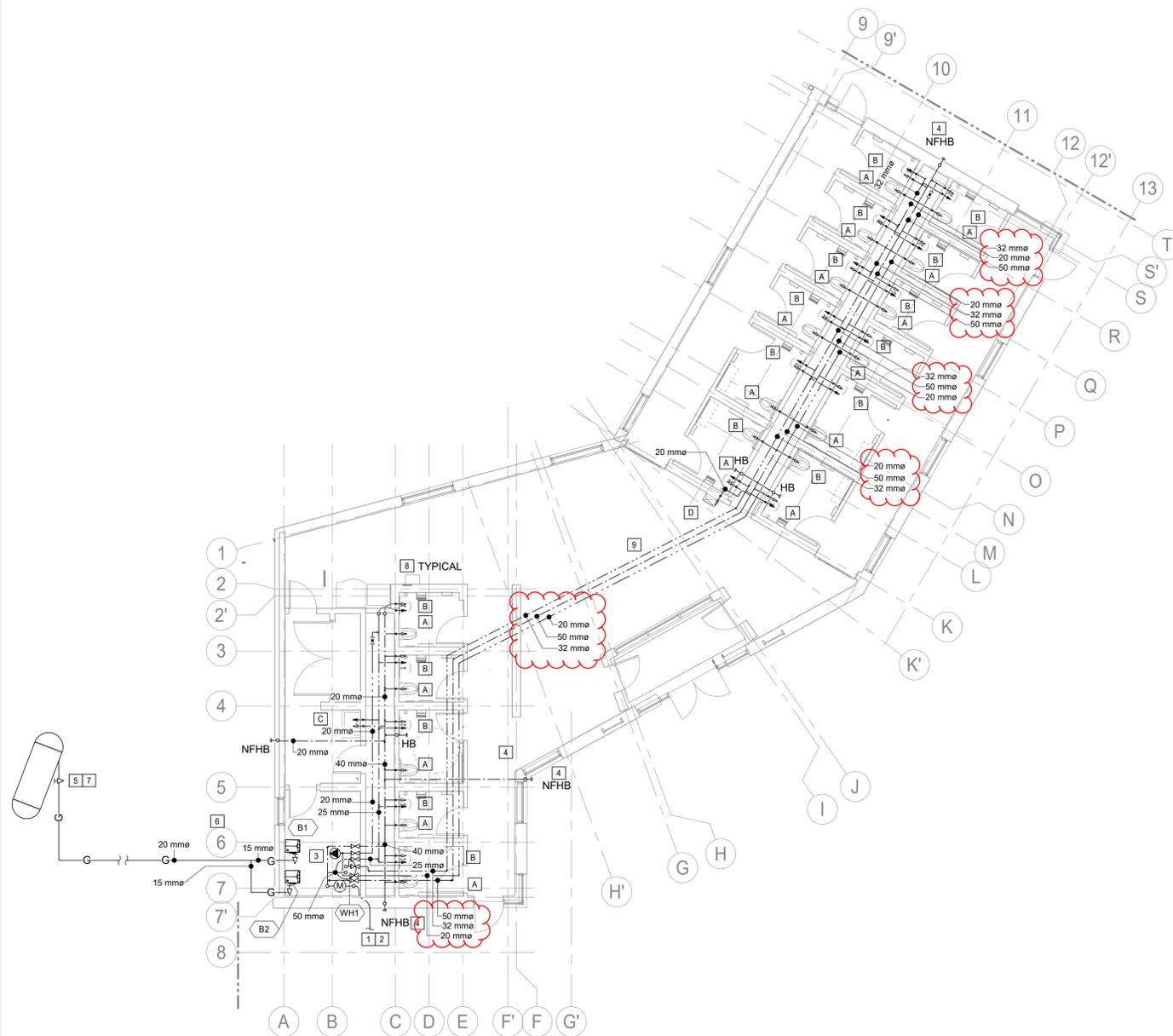
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**GENERAL NOTES**

- BIDDING CONTRACTORS ARE TO REVIEW ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL AND STRUCTURAL DRAWINGS PRIOR TO SUBMITTING TENDER PRICE.
- LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE, VERIFY ON SITE.
- CONTRACTOR TO ENGAGE STRUCTURAL ENGINEER TO VERIFY ALL SEISMIC REQUIREMENTS FOR PIPE AND DUCT HANGING METHODS.
- WHERE DISCREPANCIES ARE FOUND, CONTACT ENGINEER IN WRITING PRIOR TO SUBMITTING PRICE.
- PLUMBING LINES ETC. ARE SHOWN DIAGRAMMATICALLY, FINAL LOCATIONS, ROUTING ETC. TO BE CO-ORDINATED ON SITE.
- PROVIDE TRAP SEALER FOR ALL FLOOR AND HUB DRAINS.
- EXTEND SANITARY VENT LINE FROM FIXTURES AS PER NATIONAL AND LOCAL PLUMBING CODES.
- ALL FLOOR MOUNTED MECHANICAL EQUIPMENT TO BE MOUNTED ON 100mm HOUSE KEEPING PAD.
- CONTRACTOR TO PROVIDE LAPTOP IN MECHANICAL ROOF TO FACILITATE COMMISSIONING/ MAINTENANCE.
- CONTRACTOR TO ENSURE ALL MECHANICAL EQUIPMENT SHALL BE RATED TO PERFORM AT HIGH ELEVATION.

**PLUMBING NOTES**

- APPROXIMATE LOCATION OF INCOMING 100mmø DCW LINE. CONTRACTOR TO CONFIRM EXACT LOCATION ON SITE.
- EXTEND 100mmø PVC PIPE INSIDE THE BUILDING AND TERMINATE ABOVE THE FLOOR IN MECHANICAL ROOM. PROVIDE APPROVED CONVERSION FROM PVC TO PEX AND RUN JOINLESS PEX TO 75mmø WATER METER IN MECHANICAL ROOM. PROVIDE APPROVED WATER METER AS PER LOCAL JURISDICTION.
- EXTEND 40mmø CW, 25mmø HW AND 15mmø RECIRC LINE TO SOUTH WING WASHROOM AND EXTEND 40mmø CW, 32mmø HW AND 15mmø RECIRC LINE TO NORTH WING WASHROOM.
- EXTEND 20mmø CW TO NON-FREEZE HOSE BIBB. NFHB TO BE 914mm A.F.F. COORDINATE WITH ARCHITECT. NON-FREEZE HOSE BIBB TO BE JAY-R SMITH 55090QT OR EQUIVALENT.
- APPROXIMATE LOCATION OF 500 GALLON PROPANE GAS TANK C/W REGULATOR TO BE SUPPLIED AND INSTALLED BY CONTRACTOR AS PART OF THIS CONTRACT. ENSURE TANK HAS 10FT CLEARANCE FROM BUILDING AND PROPERTY LINE. CONTRACTOR TO CONFIRM EXACT REQUIRED EQUIPMENT WITH THE SUPPLIER BEFORE SUBMITTING BID. ENSURE TANK IS RATED FOR HIGH ALTITUDE OPERATION AS PER CSA B149.2-15.
- EXTEND 20mmø GAS LINE FROM PROPANE TANK TO BOILERS C/W GAS COCK. CONFIRM PIPE SIZE BASED ON THE EXACT LENGTH OF THE GAS PIPE ON SITE. GAS PIPE FROM PROPANE TANK TO THE BUILDING TO BE BURIED UNDERGROUND. CONFIRM UNDERGROUND DEPTH OF THE PIPE AND DETAIL WITH SUPPLIER.
- PROPANE TANK TO BE LOCATED 38FT (11582mm) FROM THE BUILDING. CONTRACTOR TO COORDINATE WITH LANDSCAPING FOR EXACT LOCATION OF THE TANK ON SITE.
- PROVIDE ZURN MODEL 1280XL, WADE 4481 OR APPROVED EQUIVALENT WATER HAMMER ARRESTOR. ARRESTOR LOCATION AND SPACING SHALL BE AS PER MANUFACTURER'S RECOMMENDATION.
- COORDINATE WITH PCA FOR PIPE INSULATION COLOR WHERE THE PIPE IS EXPOSED TO PUBLIC AREA.



**01 FLOOR PLAN - PLUMBING LAYOUT**  
M2 1 : 100

11	ADDENDUM #4	19-02-14
10	ADDENDUM #3	19-02-06
8	ADDENDUM #1	19-01-24
7	ISSUED FOR TENDER	18-12-13
6	99% REVIEW	18-10-26
5	99% REVIEW	18-10-19
4	99% REVIEW	18-10-03
3	90% REVIEW	18-08-17
2	60% REVIEW	18-06-08
1	30% REVIEW	18-03-23

Revision /	Description / Description	Date / Date
Client / client		



Project title/Titre du projet

**ROGERS PASS WASHROOM FACILITY AND DAY USE AREA**

Approved by/Approve par  
MB  
Designed by/Concept par  
DL  
Drawn by/Dessine par  
DL  
Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client / client  
**Parks Canada**

Drawing title / Titre du dessin

FLOOR PLAN - PLUMBING LAYOUT

Project No. / No. du project CAI 752	Sheet / Feuille M2	Revision no. / La Révision no.
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### MANIFOLD IN-FLOOR HEATING SCHEDULE

AREA	273 m <sup>2</sup>
TOTAL HEATING CAPACITY	107.7 MJ/Hr
TOTAL WATER FLOW	0.67 L/S
OUTPUT	89.31 MJ/Hr
NUMBER OF LOOPS	10
AVERAGE LENGTH OF LOOP	90.09 m
PIPE SIZE/LOOP	15 mm
AVERAGE WATER FLOW PER LOOP	0.06 L/S
PRESSURE DROP	21.82 kPa
PIPE SPACING	300 mm O.C.

### GAS EQUIPMENT SCHEDULE

EXTEND 200 GAS LINE FROM PROPANE TANK TO BOILERS. SIZING BASED ON 100FT LENGTH TO FURTHEST EQUIPMENT.

GAS LOAD SIZE: 1,000 CFH  
GAS EQUIPMENT LOAD: 860 CFH

BOILER B1	110 CFH
BOILER B2	110 CFH
TOTAL LOAD	220 CFH 220,000 BTU/H

### EXPANSION TANK SCHEDULE

TAG	MANUFACTURER	MODEL	VOLUME	REMARKS
EX1	AMTROL TACO OR APPROVED EQUIVALENT	AX-20V, CBX42-125 OR APPROVED EQUIVALENT	41.3 L	861 KPA OPERATING PRESSURE. ENSURE EQUIPMENT IS RATED FOR HIGH ALTITUDE OPERATION

### HOT WATER HEATER UNIT SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	CAPACITY	BTU/HR INPUT	REMARKS
WH1	MECH ROOM	LOCHINVAR TRIANGLE TUBE OR APPROVED EQUIVALENT	SMART 80 OR APPROVED EQUIVALENT	253 LT	INDIRECT	INSTALL ON HOUSE KEEPING PADS. SEE BOILER SCHEMATIC FOR PIPING. ENSURE EQUIPMENT IS RATED FOR HIGH ALTITUDE OPERATION.

### BOILER UNIT SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	GAS (kJ/Hr)	HEATING CAPACITY (kJ/Hr)	ELECTRICAL (V/PHHZ)	REMARKS
B1	MECH ROOM	LOCHINVAR, VISSMAN OR APPROVED EQUIVALENT	WHL111, B2HB 35-125 OR APPROVED EQUIVALENT	116056.143	107615.69	120/1/60	WALL MOUNTED CW LP GAS KIT. PROVIDE LOW WATER CUT-OFF SWITCH AND FLOW SWITCH. COORDINATE WITH STRUCTURAL FOR HANGING BOILERS TO THE WALL. ENSURE EQUIPMENT IS RATED FOR HIGH ALTITUDE OPERATION.
B2	MECH ROOM	LOCHINVAR, VISSMAN OR APPROVED EQUIVALENT	WHL111, B2HB 35-125 OR APPROVED EQUIVALENT	116056.143	107615.69	120/1/60	WALL MOUNTED CW LP GAS KIT. PROVIDE LOW WATER CUT-OFF SWITCH AND FLOW SWITCH. COORDINATE WITH STRUCTURAL FOR HANGING BOILERS TO THE WALL. ENSURE EQUIPMENT IS RATED FOR HIGH ALTITUDE OPERATION.

### HRV SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	SUPPLY AIR FLOW (L/S)	SUPPLY E.S.P (Pa)	ELECTRICAL (V/PHHZ)	REMARKS
HRV1	CEILING SPACE	VANEE, ALDES OR APPROVED EQUIVALENT	6L.C. H650-FI-EC OR APPROVED EQUIVALENT	283.0 L/s	124	115/1/60, 5.7A, 640W	MOUNT HORIZONTAL IN CEILING SPACE. PROVIDE ALUMINIUM CORE CW AUTOMATIC RECIRC DEFROST CYCLE. DRAIN CONDENSATE TO NEAREST DRAIN. PROVIDE ACCESS AS PER MANUFACTURER'S RECOMMENDATION. PROVIDE HRV CONTROLLER. HRV TO RUN CONTINUOUSLY.
HRV2	CEILING SPACE	VANEE, ALDES OR APPROVED EQUIVALENT	6L.C. H650-FI-EC OR APPROVED EQUIVALENT	283.0 L/s	124	115/1/60, 5.7A, 640W	MOUNT HORIZONTAL IN CEILING SPACE. PROVIDE ALUMINIUM CORE CW AUTOMATIC RECIRC DEFROST CYCLE. DRAIN CONDENSATE TO NEAREST DRAIN. PROVIDE ACCESS AS PER MANUFACTURER'S RECOMMENDATION. PROVIDE HRV CONTROLLER. HRV TO RUN CONTINUOUSLY.

### PUMP SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	FLOW (L/S)	HEAD (kPa)	MOTOR POWER	ELECTRICAL (V/PHHZ)	REMARKS
P1	BOILER INJECTION PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-40 F, 2400-40 OR APPROVED EQUIVALENT	1.021	29.98	102W	115/1/60	3 SPEED, INLINE, WET ROTOR CIRCULATOR. CONTROLLED BY BOILER CONTROLLER. SET PUMP ON MEDIUM SPEED.
P2	BOILER INJECTION PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-40 F, 2400-40 OR APPROVED EQUIVALENT	1.021	29.98	102W	115/1/60	3 SPEED, INLINE, WET ROTOR CIRCULATOR. CONTROLLED BY BOILER CONTROLLER. SET PUMP ON MEDIUM SPEED.
P3	IN-FLOOR HEATING PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-80 F, 2400-10 OR APPROVED EQUIVALENT	0.67	45	160W	115/1/60	MAINTAIN CONSTANT PRESSURE. SET PRESSURE SETPOINT TO 15FT OF HEAD FOR COMMISSIONING.
P4	IN-FLOOR HEATING STANDBY PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-80 F, 2400-10 OR APPROVED EQUIVALENT	0.67	45	160W	115/1/60	MAINTAIN CONSTANT PRESSURE. SET PRESSURE SETPOINT TO 15FT OF HEAD FOR COMMISSIONING.
P5	DOMESTIC WATER HEATER INJECTION PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-80 F, 2400-10 OR APPROVED EQUIVALENT	0.30	45	152W	115/1/60	INLINE WET ROTOR CIRCULATOR. PROVIDE TEKMAR 150 CONTROLLER TO MAINTAIN DISCHARGE TEMPERATURE SETPOINT ON WATER HEATER. SET AT MEDIUM SPEED.
P6	DOMESTIC WATER HEATER STANDBY PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UPS-32-80 F, 2400-10 OR APPROVED EQUIVALENT	0.30	45	152W	115/1/60	INLINE WET ROTOR CIRCULATOR. PROVIDE TEKMAR 150 CONTROLLER TO MAINTAIN DISCHARGE TEMPERATURE SETPOINT ON WATER HEATER. SET AT MEDIUM SPEED.
P7	DOMESTIC WATER RECIRC PUMP	GRUNDFOS, TACO OR APPROVED EQUIVALENT	UP 15-18B5, 006-BC4 OR APPROVED EQUIVALENT	0.18	29.98	85W	115/1/60	INLINE CIRCULATOR CW TIMER AND AQUASTAT. SET AT MEDIUM SPEED

### PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	MANUFACTURER	CAT. #	MODEL	ACCESSORIES	TRIM/SUPPLIES	TRAP	DRAIN	VENT	CW	HW
A	WALL HUNG WATER CLOSET (ADA)	AMERICAN STANDARD, TOTO OR APPROVED...	2856.128	AFWALL MILLENIUM FLOWISE, 381mm HEIGHT, 1.28 Gpl, ELONGATED SEAT, FLUSHOMETER MANUAL FLUSH VALVE, ADA COMPLIANT, MODEL 3461.001	SOLID PLASTIC, OPEN FRONT, WHITE SEAT, BOLTS, NUTS AND CAPS, FLEXIBLE HOSE CW STOPS ON SUPPLIES	MANUAL FLUSH VALVE AMERICAN STANDARD MODEL 6047.121	INTEGRAL	75	38	25	-
B	WALL HUNG LAVATORY	AMERICAN STANDARD, TOTO OR APPROVED EQUIVALENT	0955.000	MURRO UNIVERSAL DESIGN WALL-HUNG LAVATORY, HOLES ON 102mm CENTERS, ADA COMPLIANT	KNEE GUARD 0059 020, STOPS ON ALL SUPPLIES	TOTO TEL105 SERIES CW ECOPOWER, CONTROL MODULE AND MIXING VALVE. ENSURE CONTROL MODULE IS INSTALLED RECESSED.	P-TRAP	40	32	15	15
C	MOP SINK	FIAT, KINDRED OR APPROVED EQUIVALENT	MSB-2424	MOLDED-STONE MOP SERVICE BASSIN	STAINLESS STEEL DRAIN, STAINLESS STEEL BUMPER GUARDS	CRANE 830AA WALL MOUNTED CW PAIL HOOK, VACUUM BRAKER, HOSE CONNECTION, 1200mm HOSE	P-TRAP	75	40	15	15
D	WATER FOUNTAIN	ELKAY, HAWKS OR APPROVED EQUIVALENT	E2S8WSSK	115/1/60, 5A FLA, 370W, c/w bottle filling station. Stops on supplies	STOPS ON SUPPLIES	N/A	P-TRAP	40	32	20	20

CONFIRM ALL PLUMBING FIXTURES WITH ARCHITECT, OWNER AND INTERIOR DESIGNER.

### GRILLE/ DIFFUSER SCHEDULE

GRILLE/DIFFUSER TYPE	NECK SIZE OR GRILLE SIZE	AIR FLOW (L/S)
TYPE S1	- EH PRICE MODEL 520/FI/A/B12 (FINISH: ALUMINUM)	
TYPE R1	- EH PRICE MODEL 510D/FI/A/B12 (FINISH: WHITE)	
TYPE L1	- WESTVENT SF-430W, STEEL, 100mm WEATHER PROOF BLADE (FINISH: BY ARCHITECT)	

PROVIDE DAMPERS FOR EXHAUST GRILLES  
PROVIDE ALL DIFFUSERS AND GRILLES WITH INSECT SCREEN THAT CAN BE EASILY CLEANED AND REPLACED.  
PROVIDE MOUNTING KITS FOR T-BAR AND DRYWALL WHERE REQUIRED  
CONTRACTOR TO PROVIDE ACCESS PANELS WHERE BALANCING DAMPERS ARE INACCESSIBLE. CONTRACTOR TO CONFIRM LOCATION OF ACCESS PANEL WITH GC PRIOR TO INSTALLATION.  
CONFIRM WITH ARCHITECT.

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3	90% REVIEW	18 08 17
2	60% REVIEW	18 06 08
1	30% REVIEW	18 03 23

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### ROGERS PASS WASHROOM FACILITY AND DAY USE AREA

Approved by/Approve par

MB

Designed by/Concept par

DL

Drawn by/Dessine par

DL

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'ingénierie

Parks Canada

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Parks Canada

Drawing title / Titre du dessin

MECHANICAL SCHEDULES

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M6

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